

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

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(PCT Article 36 and Rule 70)

Applicant's or agent's file reference R03358PCT	<div style="display: flex; justify-content: space-between;"> FOR FURTHER ACTION See Form PCT/IPEA/416 </div>	
International application No. PCT/JP 2004/003919	International filing date (day/month/year) 23.03.2004	Priority date (day/month/year) 24.03.2003
International Patent Classification (IPC) or national classification and IPC Int.Cl. B41J2/045, 2/055		
Applicant RICOH COMPANY, LTD.		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:

a. ☐ a total of _____ sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:

☒ Box No. I
☐ Box No. II
☐ Box No. III
☐ Box No. IV
☒ Box No. V
☐ Box No. VI
☐ Box No. VII
☐ Box No. VIII

Basis of the report
Priority
Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
Lack of unity of invention
Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
Certain documents cited
Certain defects in the international application
Certain observations on the international application

Date of submission of the demand 11.06.2004	Date of completion of this report 04.02.2005
Name and mailing address of the IPEA/JP Japan Patent Office 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan	<div style="display: flex; justify-content: space-between;"> <div>Authorized officer TOSHIHIKO OSAKI</div> <div style="border: 1px solid black; padding: 2px;">2P 9110</div> </div> <div>Telephone No. +81-3-3581-1101 Ext. 3260</div>

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP 2004/003919

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ the international application as originally filed/furnished
- ☐ the description:
- pages _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the claims:
- pages _____ as originally filed/furnished
- pages* _____ as amended (together with any statement) under Article 19
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the drawings:
- pages _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to sequence listing (specify): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>2, 4-13, 15, 23, 24, 26, 31, 33-35</u>	YES
	Claims	<u>1, 3, 14, 16-22, 25, 27-30, 32, 36, 37</u>	NO
Inventive step (IS)	Claims	<u>2, 4-7, 9-12, 23, 24, 26, 31, 33-35</u>	YES
	Claims	<u>1, 3, 8, 13-22, 25, 27-30, 32, 36, 37</u>	NO
Industrial applicability (IA)	Claims	<u>1-37</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

D1:JP 2002-254630 A(RICOH COMPANY,LTD)

D2:EP 670218 A2(FUJITSU LIMITED)

D3:JP 10-264378 A(RICOH COMPANY,LTD)

The subject matter of claims 1,3,16,18 and 19 do not appear to be novel with respect to D1. D1 discloses a ink-jet head with the pressure damper room which made thin a part of thickness of the wall surface of a common liquid room. And this pressure room is equivalent to the pressure absorbing surface indicated by claims 1,3,16,18 and 19.

The subject matter of claim 8 does not appear to involve an inventive step in view of D1 and D2. D2 discloses the damper part formed with the nickel alloy, and this is equivalent to the pressure absorbing member being made of nickel indicated by claim 8.

The subject matter of claim 13 does not appear to involve an inventive step in view of D1. A line type recording head is well-known in this technical field, and it is easy for the person skilled in the art to change into the well-known line type head the ink-jet head indicated by D1.

The subject matter of claims 14 and 17 do not appear to be novel with respect to D1. The pressure damper room indicated by D1 is equivalent to the pressure absorbing surface indicated by claims 14 and 17.

The subject matter of claim 15 does not appear to involve an inventive step in view of D1.

The subject matter of claims 20-22 and 25 do not appear to be novel with respect to D2. D2 discloses the ink-jet head which formed the pressure damper which made thin a part of common holding member of a common ink chamber by laser beam machining or etching machining, and it is clear that the length of this pressure damper is shorter than the length of a common ink chamber, if Fig.29B is seen. Therefore, the pressure damper is equivalent to the damping surface indicated by claims 20-22 and 25.

The subject matter of claims 20,25,27 and 28 do not appear to be novel with respect to D1. The damper part indicated by D1 is divided into plurality, and the total length is shorter than the length of common liquid room.

The subject matter of claims 29,30,32,36 and 37 do not appear to be novel with respect to D1. The pressure damper room indicated by D1 is equivalent to the free vibration surface having thick portions and thin portions indicated by claims 29,30,32,36 and 37.